Girls STEM Institute – Identity Formation for Black Girls in STEM Fields

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Background: Women of color are disproportionately represented in STEM fields. While many systemic barriers exist due to institutional racism, other barriers begin in school that impact students' perceptions of self and STEM. Identity formation is an integral part of learner development but adverse learning experiences have drastic effects on Black girls' perceptions and self-efficacy within STEM fields. Girls STEM Institute (GSI) is an organization that develops a transformative space to empower girls of color through exploration of STEM concepts in meaningful, culturally-grounded ways. The purpose of this study is to examine and explore how the GSI experience impact students' interest and attitudes towards STEM fields.

Methods: The STEM semantics survey measuring students' interest in STEM subjects and careers was conducted amongst 42 scholars. Student perceptions of their GSI experience were obtained through journal reflections. A literature review was conducted to gain an understanding of the intersectionality of the Black girl experience, especially within STEM topics.

Results: The study is currently in progress. Preliminary data has been obtained but further data analysis is required.

Potential Impact: While the inequities that minoritized students face have been well researched and documented, critically developing initiatives to reform these inequities have been limited to individual pipeline programs and undergraduate research programs focused on diversity. While these programs have been beneficial in increasing inclusivity of minoritized students in collegiate settings, it is not enough to study and discuss the barriers that minoritized students face. It is essential to transform communities through the empowerment of youth, especially Black girls. GSI provides a framework for holistically engaging with the girls to develop their self-identity, instilling the confidence to pursue STEM careers, and providing career readiness experiences, which can cultivate a strong STEM-minded identity for Black girls.